

KUBAN, Jan

Filing of patent applications and the protection of Czechoslovak  
patents abroad. Ropa a uhle 7 no.4:127 Ap '65.

KUBAT, Jan, inz.

Grout injection equipment. Inz stavby 13 no.3:Suppl;Mechanizace  
no.3:44 '65.

ROMOVACEK, Jiri; BENES, Milos; KUBAT, Jaroslav

Comparison of absorption qualities of various oils for  
benzene absorption from coke oven gas. Sbor pal vod VSChT  
Vol. 5:227-250 '61 [publ, '62].

1. Katedra koksarenstvi a plynarenstvi, Vysoka skola chemicko-  
technologicka, Praha.

KUBAT, Jaroslav

Pilot G.S.Titov among pilots. Letecky obzor 6 no.12:388-389  
D '62.

KONRATH, Frantisek; KUBAT, Jiri, ina.

Automatic ejection of pressings from drawing presses. Stroj  
vyr 13 no.4:280-282 Ap '65.

1. Research Institute of Mechanical Engineering and Economics,  
Prague (for Konrath). 2. Research Institute of Handling of  
Materials, Prague (for Kubat).

KUBAT, Jiri, inz.; REPA, Josef

Increasing the output of medium presses. Stroj vyr 13 no.4:  
284-285 Ap '65.

1. Research Institute of Handling of Materials, Prague.

*Received*

Z/038/63/000/001/005/005  
D236/D308

AUTHOR: Kubát, Josef  
TITLE: An instrument for level measurement in reservoirs  
PERIODICAL: Jaderná energie, no. 1, 1963, 22-24

TEXT: An instrument is described for the measurement and remote indication of the level of a coal bunker or a similar reservoir as designed and built by the Tesla works in Pardubice. The radiator (source) and detector are both on the desired level of the reservoir. The difference between direct radiation and absorbed radiation is very pronounced, and easily measured (e.g. using a Co<sup>60</sup> source - 80 cm water is equivalent to a drop to 1/20 of the original value). The circuit is illustrated in Fig. 2. If the GM tube is not irradiated the negative voltage is low, and the armature of the relay is attracted. If it is irradiated the impulses are integrated in  $R_1R_2C_1$ . The time constant has to be adjusted if very small values are to be measured. The values for  $R_1, R_2, C_1$  have been determined

✓

Card 1/02

Z/038/63/000/001/005/005  
D236/D308

An instrument for level ...

experimentally as:  $R_1$  5.6 M,  $R_2$  10 M,  $C_1$  0.22 F. The valve is self-rectifying, the relay is used as working resistor. The actual instrument is so designed that up to twelve levels can be indicated, using a radiator and a detector for every level. These can either be placed in the wall or in tubes inserted into the reservoir, the advantage being that for instance a  $Co^{60}$  source of 5 to 10 mg - eqts Ra with a 5-year life is satisfactory for a radiator-to-detector distance of 1.5 m, suitable for a very large bunker. Another model has been produced for continuous measurement of levels. It has two Ge tubes in the detector, one above the other, which are both moved up and down together with the radiator. The instrument was tested at steelworks and chemical works and was very successful. The current consumption at 220 v a-c is 28 w for 12 levels. The relay has a switching output of 3 x 40 w. The instrument works between the temperatures of minus 20 to 45°C without any cooling. There are 6 figures. ✓

ASSOCIATION: Tesla Pardubice výzk. závod Přemýšlení (Research Establishment Tesla, Pardubice)

Card 2/2

KUBAT, Josef [deceased]

Level gauge. Jaderna energie 8 no.12:432 '62.

KUBAT, Josef [deceased]

Apparatus for the measurement of the level of materials in tanks.  
Jaderna energie 9 no.1:22-23 Ja '63.

1. Tesla Pardubice, Vyzkumny zavod Premysleni.

KUBAT, J.

Equipment for leveling and compacting earth channels. Inz stavby  
12 no.12: Suppl: Mechanizace no.12:199 '64.

Equipment for cleaning the buckets of bucket excavators and stowing  
machines. Ibid.:200

KUBAŤ, K.; PACAL, J.; UBL, O.

Specifications of the standards of personal material interest within an enterprise. p. 2

PRUMYSL POTRAVIN. (Ministerstvo potravinarskyho prumyslu) Praha, Czechoslovakia  
Vol. 10, no. 1, Jan. 1959

Monthly List of East European Accessions (SEAI), LV, Vol. 8, no. 7, July 1959  
Uncl.

CZECHOSLOVAKIA

KUBAT, K.

Prague, Ceskoslovenska Hygiene, No 9, 1964, pp. 286-287

"Comments on Pediatrics."

CZECHOSLOVAKIA

REINIS, Z.; WENKE, M., Docent Br; SULC, M; LOJDA, Z; KUBAT, K;  
VANECKI, R.

1. Fourth Internal Medicine Clinic (IV. nitrai klinika);
2. Pharmacological Institute (Farmakologicky ustav)  
(for Wenke);
3. Angiological Laboratory (Angiologicka  
laborator);
4. Second Institute of Pathological  
Anatomy (II. ustav patologickoanatomicky), Prague

Prague, Vnitrai lekarstvi, No 12, 1963, pp 1145-1153

"The Influence of Alloxan Diabetes on Experimental  
Atherosclerosis."

(6)

CZECHOSLOVAKIA

KOBAROVA, A., KUBAN, K., and KOVANIČ, P., with technical co-operation of HORNBEROVA, R., and LYEROVA, O., Second Institute of Pathological Anatomy (II. patologicckooanatomicky ustav), Faculty of General Medicine (Fakulta vseobecneho lekarstvi), Charles University, Prague, Prof. Dr. V. JEDLIČKA, Dr of Sciences, director; and Histological Laboratory (Histologicka laborator), Second Clinic of Gynecology and Obstetrics (II. gynekologicko-porodnicka klinika), Faculty of General Medicine (Fakulta vseobecneho lekarstvi, Charles University, Prague, Prof. Dr J. LUKAS, Dr of Sciences, director.

"Morphological Findings in the Heart Muscle of Rats Following a Hypercapnic and Hypoxic Hypothermia to a Rectal Temperature of 1.0 Degree Centigrade"

Prague, Casopis Lekarů Ceskych, Vol CII, No 32/33, 16 August 1963, pp 874-880.

Abstract [Authors' English summary]: Female rats (Wistar, own breed) were subject to a hypercapnic and hypoxic hypothermia. Cardiac arrests lasted for at least 25 minutes. Ninety percent of the animals were resuscitated. Small multiple necroses were found in the heart muscle in rats killed after different time intervals. It was found that the severity of changes was proportional to the degree of hypothermia.

CZECHOSLOVAKIA

~~APPROVED FOR RELEASE: 03/13/2001~~ ~~CIA-RDP86-00513R000827010015-7~~  
1963, pp 874-880.

proportional to the degree of hypothermia. Necroses were an exception in rats subject to hypercapnia and hypoxia. Early regressive changes of muscle fibers resembled pressure artefacts when common histological staining was used. Thirty references, including 3 Czech and 2 Russian.

KUBAT,K.; PAVROVSKY,J.

On indications for and methods of administering tetanus toxoid  
and antitetanus sera. Cesk. pediat. 19 no.1:67-70 Ja'64.

KUBAT, K.

Comments from pediatrics. Cesk. hyg. 4 no.5:286-287 Je'64

1. Hlavní odborník pro péči o dítě MZd [Ministerstvo zdravot-  
nictví], Praha.

PAVROVSKY, J.; KUBAT, K.

On indications and methods of administering antitetanus ana-  
toxin and antitetanus sera. Rozhl. chir. 43 no.3:137-141  
Mr'64.

POLACEK, K.; KUBAT, K.

Neonatal erythroblastosis in clinical practice. *Pediat.listy*  
5 no.1:22-27 Ja-F '50. (CML 19:3)

1. Of the Department for the Newborn of the Infant Welfare Clinic  
in Prague-Podole (Head -- Docent K.Kubat, M.D.) and of the Third  
Obstetrical Clinic in Prague-Podole (Head -- Prof. J.Trapl, M.D.).

KUBAT, K.

KUBAT, K.

Ward for prematures at the Prague-Podli University Children  
Hospital. *Pediat. listy* 5:5, Sept.-Oct. 50. p. 293-7

1. Of the Clinic of Infant Welfare in Prague-Podole (Head-  
Docent Kamil Kubat, M. D.).

CLML 20, 3, March 1951

KUBAT, K.; POLACEK, K.

[Survey of premature babies in the III Maternity Clinic K.U. 1  
Prague, 1947-48] Studie o nedonosenych detech na III. porodnicke klini-  
ce K.U. v Praze v letech 1947-1948. Cesk.gyn. 15 no.1-2:143-150 '50.  
(CIML 19:1)

1. Of the Newborn Infants Department of the Infant Health Clinic (Head --  
Docent K.Kubat, M.D.,) Prague, and of the Third Obstetrical Clinic  
(Head -- Prof. J.Trapl, M.D.), Prague.

KUBAT, F.

KUBAT K., POLACEK K., TROJANOVA H.

Nekolik zakladnich dat o nedoci senych detech narozenych Praze v letech 1947-1948. [Statistical data on incidence of premature birth and mortality in Prague, 1947-1948] Cesk. gyn. 15:11-5 1950 p. 250-7

1. Of the Infant's Welfare Clinic, Prague-Podole.

CLIL 19, 5, Nov. 50

LEMANT, F.; KUBAT, K.; LUKAS, J.; VOJTA, M.

Maternal and child welfare. *Pediatr. listy* 6 no.2:77-88 Mar-Apr 1951.  
(CJML 20:9)

KUBAT, K.

Organisation of wards for the newborn. *Pediat. listy*  
6 no.3:168-170 May-June 1951. (CJML 20:11)

1. Of the Institute of Care for Mother and Child in  
Prague-Podole (Director -- Prof. J. Trapl), Head of  
the Pediatric Division Docent K. Kubat, M.D.

KUBAT, K.

Nurseries in USSR. Pediat. listy, Praha 6 no.4:218-221  
July-Aug 1951. (CML 21:1)

1. Of the Institute for the Care of Mother and Child (Director  
Prof. J. Trpal, M.D.)

KUBAT, K.;VISOVA, M.;POHLOVA, J.

Neonatal mortality. Prakt. lek., Praha 32 no. 13:299-301 5 July  
1952. (CJML 22:4)

1. Of the Institute of Mother and Child Welfare (Head--Prof. J.  
Trapl, M. D.), Prague.

KUBAT, Kamil, Doc., Dr.; POLACEK, Karel, Prim. Dr.; ZHAMENACEK, Karel, Dr.

Anoxic syndrome in newborn (asphyxia neonatorum). *Cesk. gyn.* 19 no. 5:301-311 Sept 55.

1. Ustav pro peci o matku a dite: reditel prof. Dr. J. Trapl,  
nositel Radu republiky.  
(ASPHYXIA, NEONATORUM,)

KUBAT, K., Doc., MUDr.; HECKO, I., Doc., MUDr.; JANCIKOVA, E., MUDr.

Medical care for children in nurseries. Cesk. zdravot. 4 no.9:  
514-524 Sept 56.

1. Z Ustav pece o matku a dite v Praze-Podoli-reditel prof.  
MUDr. J. Trapl a z Ustavu hygieny, oblastneho ustavu pre  
Slovensko v Bratislave-riaditel doc. MUDr. P. Macuch.  
(INFANT WELFARE,  
nurseries, med. care (Cz))

KUBAT, K., Doc.; SRB, V., Dr.; KUCERA, M.

Infant and neonatal mortality in Czechoslovakia in 1955.  
Cesk. pediat. 11 no.10:776-781 Oct 56.

1. UPMD, Praha-Podoli, Statni urad statistikcy, Praha.  
(INFANT MORTALITY  
in Csech. in 1955 (Cs))

STOLOVA, O.; KUBAT, K., Doc.

Analysis of current status of child care in Czechoslovakia  
and its main tasks in 1957. Cesk. pediat. 12 no.1:1-12 Jan 57.

1. Prednosta odboru zena a dite. (for Stolova). Hlavni odbornik  
pro peci o dite. (for Kubat). Ministerstvo zdravotnictvi, Praha.  
(CHILD WELFARE  
in Czech. (Cs))

STOLOVA, Olga; KUBAT, Kamil

Unified hospital in pediatrics. Cesk. pediat. 12 no.9:800-804 5 Sept  
57.

1. Ministerstvo zdravotnici, Praha, odbor Zena-dite.  
(HOSPITALS  
pediatric (Cs))

KUBAT, K.

Present epidemic of influenza in children. Cas. lek. cesk. 96 no.44:  
1407-1409 31 Oct 57.

1. Detska propedeuticka klinika nemocnice Pod Petrinou, prednosta  
prof. Dr Kamil Kubat, K.K., Praha III, Vlasaka 336.  
(INFLUENZA, in inf. & child  
epidemic in Czech. (Cz))

DITTRICH, J.; FRYNTA, E.; JIROUT, J.; KUBAT, K.; TOSOVSKY, V.

Experience with 80 cases of operated meningocele in newborn & young infants. Cesk. pediat. 14 no.2:123-129 5 Feb 59.

1. Detska chirurgicka klinika, prednosta doc. MUDr. V. Kafka, oddeleni pro ortopedii a traumatologii, prednosta doc. MUDr. V. Tosovsky. Neurologicka klinika, prednosta akademik prof. MUDr. K. Henner. Detske neurologicke oddeleni, vedouci lekar: doc. MUDr. I. Lesny II. patologicko-anatomicky ustav Karlovy university: prednosta prof. MUDr. V. Jedlicka.

(MENINGES

meningocele in newborn & young inf., surg. (Cs))

KUBAT, K.; STOIOVA, O.

Future plans in the field of pediatrics. Cesk. pediat. 14 no.3:197-  
202 5 Mar 59.

1. Ministerstvo zdravotnictvi, odbor pece o zenu a dite.  
(PEDIATRICS,  
in Czech. (Cs))

HOUSTEK, J.; KUBAT, K.

15 years of Czechoslovakian pediatrics. Cesk. pediat. 15 no.5:  
389-395 My '60.  
(PEDIATRICS)

KUBAT, K.; POLISENSKY, J.

Society and child care in Czechoslovakia from the end of feudalism to  
the present. Cesk. pediat. 17 no.12;1112-1114 D '62.  
(CHILD WELFARE)

KUBAT, Kamil, prof., red.; SYROVATKA, Augustin, red.; VOYTA, Miroslav  
[Vojta, Miroslav], dots., red.; FRIDMAN, V.S. [translator];  
FRIDMAN, R.A. [translator]; BUENOVA, M.M., prof., red.;  
LYUDKOVSKAYA, N.I., tekhn. red.

[Prevention of prenatal mortality] Profilaktika perinatal'noi  
smertnosti. Pod red. M.M. Dubnovoi. Moskva, Medgiz, 1963. 156 p.  
Translation from the Czech. (MIRA 16:6)

(FETUS, DEATH OF)

KUBAT, K.; SYROVATKA, A.; KUCERA, M.

Perinatal mortality in the Czechoslovakian SSR and conditions of fetal development. Cesk. pediat. 19 no.9:769-774 S '64.

1. Ustav pece o matku a dite v Praze, detska propedeuticka klinika fakulty detskeho lekarstvi Karlovy University v Praze,; Ustredni urad lidove kontroly a statistiky v Praze.

STPYHAL, P.; TOGOVSKY, V.; KUBAT, K.; KOVANIC, P.

Giant-cell tumors of the spine. Acta chir. orthop. traum. cech.  
31 no.1:29-33 F '64.

I. I. Klinika pro ortopedickou a detskou chirurgii fakulty  
vseobecneho lekarstvi Karlovy University v Praze, (prednosta  
prof. dr. M. Jaros); Traumatologicke oddeleni detske chirurgicke  
kliniky fakulty detskeho lekarstvi Karlovy University v Praze,  
(prednosta prof. dr. V. Kafka, DrSc., vedouci odd. dr. V.  
Tosovsky, DrSc.) a II. patologickoanatomicky ustav fakulty  
vseobecneho lekarstvi Karlovy University v Praze (prednosta  
prof. dr. V. Jedlicka, DrSc.

RUBAT, K.

"Discussion of Physiology and Practice." p. 439,  
(CESKOSLOVENSKA FYSIOLOGIE, Vol. 2, No. 4, Dec. 1953, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4  
No. 5, May 1955, Uncl.

RUDEK, A.

"Resolution of the 2nd National Congress of Czechoslovak Physiologists, Pharmacologists, and Biochemists Held in Brno, September 10-12, 1953." p. 443, (CESKOSLOVENSKA FYSIOLOGIE, Vol. 2, No. 4, Dec. 1953, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4  
No. 5, May 1955, Uncl.

EEAL, p.

"Conference on Experimental Procedure when Working with Conditioned Reflexes."  
p. 443, (CESKOSLOVENSKA FYSIOLOGIE, Vol. 2, No. 4, Dec. 1953, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4  
No. 5, May 1955, Uncl.

KUMAT, A.

"Survey of the Works Discussed at the 2nd National Congress of Czechoslovak Physiologists, Pharmacologists, and Biochemists in Brno, September 10-12, 1953." p. 444, (CESKOSLOVENSKA FYSIOLOGIE, Vol. 2, No. 4, Dec. 1953, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4  
No. 5, May 1955, Uncl.

KUBAT, K.

"Haemangi endothelioma hepatis." p. 137. (CASOPIS LEKARU CESKYCH, Vol. 92, #5, Jan. 1953, Czechoslovakia)

SO: Monthly List of Russian Accessions, East European Vol. 2, #8, Library of Congress, August 1953, Uncl.

**KUBAT, Karel, MUDr**

**Epidemic of influenza in 1954 according to data of the Second  
Patho-Anatomical Institute. Prakt.lek., Praha 34 no.20:465-467 20 Oct 54.**

- 1. II pathologicko-anatomicky ustav. Prednosta: prof. Dr V.Jedlicka.  
(INFLUENZA, epidemiology,  
in Czech., pathol. aspects)**

KUBAT, K.

EXCERPTA MEDICA Sec.16 Vol.4/3 Cancer March 56

1011. KUBAT K. and TOJKOROVICOVA H. *Primary tumours of the pericardium. A contribution to the question of pericardial mesotheliomas Czechian text - Csl. Onkol.* 1955, 2:1 (68-82)

Report on a case in a woman of 61. She had been admitted with heart failure and the clinical diagnosis had been exudative pericarditis. At puncture of the pericardium the needle met a firm obstacle; the tentative diagnosis of lung cancer infiltrating the pericardium was made. Histological examination revealed a meso- (endo-, coelo-) thelioma infiltrating the myocardium.

Brückner - Ostrava

KUBÁT K.

EXCERPTA MEDICA Sec.19 Vol.1/2 Cardiovascular Feb 57

552. KUBÁT K. and TODOROVICOVÁ H. Pathol.-Anat. Inst.: 4. Intern. Klin., Med. Fak., Karls-Univ., Prag. Beitrag zur Frage der Mesotheliome des Herzbeutels *Mesothelioma of the pericardium* *Cardiologia* (Basel) 1956, 29/6 (385—400) Illus. 14

A primary malignant neoplasm of the pericardium was found in a woman aged 61. It probably originated from an epicardial leaf at the base of the heart and led to obliteration of the pericardial sac and constriction of the heart. Clinically, it was manifested as progressive heart failure. Histologically, it was identical with the neoplasms described as endo-mesocelotheliomas. Invasion of the tumour into the myocardium was found. The views of various authors concerning endotheliomas as morphological entities are discussed. (XVIII, 5, 6, 15\*)

EXCERPTA MEDICA Sec 8 Vol 12/5 Neurology May 59

2087. VASCULAR MALFORMATIONS OF THE BRAIN (ANGIOMA RACEMOSUM CEREBRI) - Vaskulární malformace mozku (angioma racemosum cerebri) - Kubát K. II. Patol.-Anat. Úst. Fak. Všeobecného Lék., Praha - ČSL. NEUROL., 1958, 21/5 (340-353) Illus. 10

A description of 2 cases of angioma racemosum of the brain is given. The first case was a woman of 66, suffering from epileptic fits, who suddenly lost consciousness and died in 8 days. Autopsy revealed a venous racemose angioma in the parieto-occipital region of the right hemisphere, forming a wedge from the pia mater into the brain tissue. The cause of death was protracted cerebral oedema due to increased permeability of the blood vessels and capillaries, especially in the region of the malformation. In the second case an arterio-venous racemose angioma was found in a new-born girl who suffered from asphyxia after birth and died at the age of 5 days. The malformation was situated in the pia mater above both cerebral hemispheres and round the brain stem. An anomalous branch of the posterior cerebral artery on the left led into the vena magna Galeni, closed by thrombosis which was complicated by a severe internal hydrocephalus, dispersed haemorrhages, softenings and post-malatic pseudocysts in the region draining into the vena magna. There were multiple softenings and pseudocysts in the cortex and in the sub-cortical parts of the telencephalon, often in laminar arrangement. This was due to a combination of considerably increased intracranial pressure and circulatory anomalies. The direct cause of death was a severe broncho-pneumonia combined with increased intracranial pressure and oedema of the brain. Calcification was found in the vessel walls and round the capillaries in the first case, and around the softenings and in the walls of the postmalatic pseudocysts in the second case.

REINIS, Z.; HRABANE, J.; VANECEK, R.; KUBAT, K.; TRAVNICEK, T.; TRAVNICEKVA, I.

Effect of cortisone in clinical and experimental atherosclerosis.  
Sborn. lek. 60 no.10:299-306 Oct 58.

1. IV, internii klinika fakulty vseobecneho lekarstvi Karlovy university v Praze, prednosta prof. dr. Bohumil Prusik II. patologicko-anatomicky ustav fakulty vseobecneho lekarstvi Karlovy university v Praze, prednosta prof. dr. Vaclav Jedlicka Fysiologicky ustav fakulty vseobecneho lekarstvi Karlovy university v Praze, prednosta prof. dr. Frantisek Karasek.

(CORTISONE, ther. use,  
arteriosclerosis, clin. & exper. studies (Cz))  
(ARTERIOSCLEROSIS, ther.  
cortisone, clin. & exper. studies (Cz))

KUBAT, Karel

Dysembryoblastic tumors of renal origin. Sborn. lek. 61 no.2:49-52 Feb 59.

II. patologickoanatomicky ustav fakulty vseobecneho lekarstvi Karlovy university v Praze, prednosta prof. dr Vaclav Jedlicka .A. J. I. pat.-anat. ustav KU, Studnickova 2, Praha 2.

(NEPHROBIASTOMA, case report  
(Cz))

KUBAT, K.

Lipoblastic sarcoma of pericardium. Sborn. lek. 61 no.5:145-149 May 59.

I. II. patologickoanatomicky ustav fakulty vseobecneho lekarstvi Karlovy university v Praze, prednosta prof. dr. V. Jedlicka. As. dr. K.K.,  
II patologickoanatomicky ustav, U nemocnice 4, Praha 2.

(PERICARDIUM, neoplasms

lipoblastic sarcoma, case report (Cz))

(LIPOSARCOMA, case reports

lipoblastic sarcoma of pericardium (Cz))

REINIS, Z.; PUCHMAYER, V.; HRABANE, J.; VANECZEK, R.; KUHAT, K.; DUBEN, Z.

Contribution of experimental atherosclerosis in chicks. Sborn. lek.  
61 no.11-12:325-330 Nov 59.

1. IV. interni klinika fakulty vseobecneho lekaratvi University Karlovy  
v Praze, prednosta prof. dr. M. Fucik II patologickoanatomicky ustav  
fakulty vseobecneho lekaratvi University Karlovy v Praze. prednosta  
prof. dr. V. Jedlicka Okresni veterinarni stredisko, Caslav.  
(ARTERIOSCLEROSIS, exper.)

KURAT, Karel

Electrokymography of the heart & large arteries in healthy individuals.  
Cas. lek. cesk. 98 no.26:806-816 26 June 59.

1. Ustav pro choroby obehu krevniho Praha-Krc, reditel prof. MUDr.  
Klement Weber. K.K., Praha-Krc, Budejovicka 800. Do redakce doslo v  
cervenci 1958.

(KYMOGRAPHY

electrokymography of heart & large arteries in healthy  
individuals (Cs))

(CARDIOVASCULAR SYSTEM, physiol.  
same)

REINIS, Z.; FUCHMAYER, V.; VEHECENK, R.; KUBAT, K.; DUBEK, Z.

Effect of the external environment on experimental atherosclerosis in chicks. Shorn.lek. 62 no.10:291-298 0 '60.

1. IV. interni klinika fakulty vseobecneho lekarstvi University Karlovy v Praze, prednosta prof. dr. M.Fucik. II. patologicko-anatomicky ustav fakulty vseobecneho lekarstvi University Karlovy v Praze, prednosta prof. dr. V.Jedlicka. Veterinarni stredisko v Caslavi.

(ARTERIOSCLEROSIS exper)

KUBAT, Karel; DEJDAR, Rudolf; WIDIMSKY, Jiri

Value of electrokymographic diagnosis of chronic cor pulmonale.  
Cas.lek.cesk.99 no.42:1321-1325 14 0 '60.

1. Ustav pro choroby obehu krevniho, Praha-Krc, reditel prof.  
MUDr. Kl. Weber.  
(PULMONARY HEART DISEASE diag)  
(KYMOGRAPHY)

REINIS, Z.; FUCHMAYER, V.; VANECEK, R.; KUBAT, K.; DUBEN, Z.

The influence of environmental factors on experimental atherosclerosis in chickens. Cor Vasa 3 no.3:178-187 '61.

1. Fourth Medical Clinic, Second Institute of Pathology, Charles University, Prague, and Veterinary Center, Caslav, Czechoslovakia.

(ARTERIOSCLEROSIS exper) (ENVIRONMENT)  
(CHOLESTEROL nutrition & diet)

KAFKA, Vaclav, prof. MUDr.; KOUTECKY, JOSEF, Dr S<sup>r</sup> Mudr.; KUBAT, Karel, MUDr.

Causes of death of surgically treated children. Acta univ. carol.  
[med.] no.9:1-127 '61.  
(PEDIATRICS surg) (MORTALITY)

PREROVSKA, I.; VANECEK, R.; KUBAT, K.

Effect of carbon disulfide on experimental atherosclerosis in the rabbit. Acta univ. carol. [med.] Suppl. 14:177-185 '61.

1. Klinika nemoci z povolani fakulty vseobecneho lekarstvi University Karlovy v Praze, prednosta prof. dr. J. Teisinger II. patologicko-anatomicky ustav fakulty vseobecneho lekarstvi University Karlovy v Praze, prednosta prof. dr. V. Jedlicka.  
(ARTERIOSCLEROSIS exper) (CARBON DISULFIDE pharmacol)

REINIS, Z.; PUCHMAYER, V.; PROCHAZKA, B.; DUBEN, Z.; VANECEK, R.; KUBAT, K.

Effect of nutrition and physical activity on experimental atherosclerosis in chicks. Cas.lek.cesk 100 no.22:670-677 2 Je '61.

1. IV. interni klinika KU v Praze, prednosta prof. dr. M. Fucik, Veterinarai sprava Havlickov Brod, II. patologickoanatomicky ustav KU v Praze, prednosta prof. dr. V. Jedlicka.

(ARTERIOSCLEROSIS exper)

REINIS, Z.; PUCHMAYER, V.; SEDLAKOVA, E.; SULC, M.; VANECEK, R.; KUBAT, K.;  
TRAVNICKOVA, E.

Effect of chlortetracycline on experimental atherosclerosis in rabbits.  
Cas.lek.cesk 100 no.37:1153-1156 15 S '61.

1. IV. interni klinika, Angiologicka laborator, II. patologickoanatomicky  
ustav, Fyziologicky ustav KU v Praze.

(CHLORTETRACYCLINE pharmacol)  
(ARTERIOSCLEROSIS exper)

KASALICKY, J.; VALACH, A.; DEJDAR, R.; KUBAT, K.; WIDINSKY, J.; VYSLOUZIL, Z.;  
LUKES, M.

Cor pulmonale in tuberculosis. Rev. czech. med, 8 no.3:164-170 '62.

1. Institute for Cardiovascular Research, Prague-Krc Director: Doc.  
Dr. J. Brod, D.Sc. Tuberculosis Research Institute, Prague-Bulovka  
Director: Doc. Dr. R. Krivinka.  
(TUBERCULOSIS, PULMONARY) (PULMONARY HEART DISEASE)

BRODSKY, Milan; DRAPKA, Miloslav; KAMELKA, Miroslav; KUDRNOVA, Lumila;  
BOR, Imrich; KRCILKOVA, Milada; DITTRICH, Jan; KUBAT, Karel

Prolonged perfusion in children at a normal temperature. (Conduction  
of operations for congenital cardiac defects). Rozhl. chir. 41 no.3:  
167-;76 Mr '62.

1. Klinika detske chirurgie FDL KU v Praze, prednosta prof. DrSc.  
MUDr. V. Kafka II. detska klinika FDL KU v Praze, prednosta prof.  
DrSc. MUDr. J. Houstek IV. detska klinika FVL KU v Praze, prednosta  
prof. DrSc. MUDr. F. Blazek Imerologicka klinika FVL KU v Praze,  
prednosta akademik K. Henner II. patologickoanatomicky ustav FVL  
KU v Praze, prednosta prof. DrSc. MUDr. V. Jedlicka.  
(HEART MECHANICAL) (HEART DEFECTS CONGENITAL surg)

KUBAT, K.; FLANDERA, V.; HAHN, P.; KOLDOVSKY, O.

Late sequelae of early adaptation; effect of premature weaning on spermatogenesis in rats. Sborn. lek. 64 no.12:258-262 D '62.

1. II patologicko-anatomicky fakulty vseobecneho lekarstvi University Karlovy v Praze, VUPL-Konarovice Fyziologicky ustav CSAV v Praze.  
(ADAPTATION PHYSIOLOGICAL) (FERTILITY) (SPERMATOOA)  
(REFLEX CONDITIONED) (ANIMALS NEWBORN)

KUBAT, Karel

Morphological findings in the myocardium and some other organs  
after direct hypothermia in rats and dogs. Acta Univ. Carol.  
[med.] (Praha) 9 no.6:523-552 '63

1. II. patologickoanatomicky ustav fakulty vseobecneho lekar-  
stvi University Karlovy v Praze; prednosta: prof. MUDr. V.  
Jedlicka, DrSc.

DUDEN, Z.; REINIS, Z.; PUCHMAYER, V.; SULC, M.; KUBAT, K.; VANECEK, R.

Ecological factors in experimental arteriosclerosis in fowl.  
Sborn. Lék. 66 no.5:125-136 Ap '64.

1. IV. interni klinika fakulty vseobecneho lekarstvi University Karlovy v Praze (prednosta prof. dr. M. Fucik), II. patologicko-anatomicky ustav fakulty vseobecneho lekarstvi University Karlovy v Praze (prednosta prof. dr. V. Jedlicka, DrSc.) a Veterinarni laborator v Havlickove Brode, oddeleni pro choroby drubeze.

KOVANIC, P.; KUBAT, K.; KUBATOVA, A.

Pressure artefacts in the rat myocardium. Cas. Lek. Cesk.  
103 no.17:462-465 Ap 24 '64.

1. II patologickoanatomicky ustav fakulty vseobecneho lekarstvi  
KU [Karlova University] v Praze, (prednosta prof. Dr. V. Jedlicka,  
DrSc.) a Histologicka laborator II. gynekologicko-porodnicka  
kliniky fakulty vseobecneho lekarstvi KU [Karlova University] v  
Praze, (vedouci prof. dr. J. Lukas, DrSc).

XPAT, L.

Transistor as a linear four-pole device. (Supplement) p. P33. SIAVOBRANDY  
REZOR. (Ministerstvo strojirenstvi a ministerstvo spoju) Praha. Vol.  
16, no. 2, Aug. 1955.

SOURCE: East European Accessions List, Vol. 5, no. 9, September 1956

P/0019/64/013/001/0043/0050

ACCESSION NR: AP4039451

AUTHOR: Kubat, L.

TITLE: The reliability factor for parallel redundant systems

SOURCE: Archiwum elektrotechniki, v. 13, no. 1, 1964, 43-50

TOPIC TAGS: circuit component, redundant system, parallel redundant system information theory, redundant system reliability, automatic control theory

ABSTRACT: The article analyzes the reliability of various methods of multiplying components and circuits in complex systems. Two types of multiplication are examined on the basis of the general theory of probability. The first is multiplication of each component in an individual circuit while the second is based on the multiplier of individual circuits or groups of circuits. The author shows that the most reliable method is multiplication of the separate components when the conditions satisfying the derived mathematical relations are maintained. In the case of extremely reliable components, the relations

$$\alpha(m, n, l) = 1$$

$$\alpha'(m, n, l) = 0$$

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ACCESSION NR: AP4039451

are valid. In these equations,  $a$  is the reliability factor of parallel redundant systems with individual component redundancy and  $\alpha(m, n, r)$  is the derivative of  $\alpha(m, n, r)$  with respect to  $r$ . When the components are very reliable, the reliability of individual component redundancy can be neglected. On the other hand, the individual component redundancy is always significant in the case of components with small reliability. Inasmuch as the values for  $\alpha(m, n, r)$ , obtained from the equation  $\alpha(m, n, r_{max}) > \alpha(m, n) > \alpha(m, n, r_{min})$ , can be arranged either graphically or in tabular form, they can provide a quick estimate of both kinds of redundant systems which is useful in systems engineering practice. Original article has: 4 figures and 30 equations.

ASSOCIATION: Institute of Information and Automation, Czech. Academy of Sciences

SUBMITTED: 28Sep63

DATE ACQ: 18Jun64

ENCL: 00

SUB CODE: IE, DP

NO REF SOV: 000

OTHER: COL

Card 2/2

I 21348-66 EWP(v)/EWP(k)/EWP(h)/EWP(l)

ACC NR: AP5014287

SOURCE CODE: CZ/0088/65/001/003/0236/0270

AUTHOR: Kubat, L. (Engineer, Candidate of sciences); Ullrich, M. <sup>29</sup>  
(Engineer, Candidate of sciences)

ORG: Institute for the theory of information and automation <sup>4</sup>CSAV, <sup>B</sup>  
Prague (Ustav teorie informace a automatizace CSAV)

TITLE: Some variants of fault-finding procedures in a system

SOURCE: Kybernetika, v. 1, no. 3, 1965, 236-270

TOPIC TAGS: system maintenance, signal measurement, element measurement, signal element, fault finding

ABSTRACT: Three types of fault-finding procedures are determined by the probability method. The maintenance of complex devices and systems becomes a very important problem as more maintenance hours are used in finding the nonoperative unit of a device than for actual repair work. Thus, good fault-finding procedures are necessary for fast and efficient maintenance. There is great variation in possible fault-finding procedure. In the present paper three basic procedures are discussed, which, according to the author, are most important and theoretically interesting: 1) the signal-measurement procedure, 2) the element-measurement procedure, and 3) the replacement-of-

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I 21318-66

ACC NR: AP5014287

element procedure. All three types are solved in general and illustrated with simple examples. Orig. art. has: 20 figures and 6 tables. [Based on author's abstract.]

(KS)

SUB CODE: 14/ SUBM DATE: 10Nov64/ ORIG REF:

Card 2/2 *JPC*

KUBAT, Libor, inz. CSc.

Increasing the reliability of technical equipment. Automatizace  
7 no.5:120-123 My'64.

1. Institute of Information Theory and Automation,  
Czechoslovak Academy of Sciences.

KUBAT, L.

The advantage factor for parallel redundant systems. Archiv  
elektrotech 13 no.1:43-50 '64.

1. Institute of Information Theory and Automation, Czechoslovak  
Academy of Sciences, Praha.

I. 31529-66

ACC NR: AP6024773

SOURCE CODE: CZ/0014/65/000/007/0247/0249

AUTHOR: Urban, Pavel (Engineer); Kubat, Lubos (Candidate of sciences)

47  
P

ORG: none

TITLE: Sound level meter for tape recording and evaluation of the noise of motor vehicles

SOURCE: Sdelovaci technika, no. 7, 1965, 247-249

TOPIC TAGS: acoustic recording, tape recorder, transistorized circuit, acoustic noise, motor vehicle, acoustic equipment

ABSTRACT: The article discusses the technical requirements for such equipment and describes the MZA-3 and MZA-4 (transistorized) units which have been developed for that purpose. Circuits, technical parameters and photographs are presented. Orig. art. has: 12 figures and 1 table. [JFRS]

SUB CODE: 09, 14, 13, 20 / SUBM DATE: none / ORIG REF: 003 / OTH REF: 001

KUBAT, M.

"A Contribution to the Solution of the Problem of welded-on Bits of Coal Cutters."  
p. 88 (Uhlí A Rudy, Vol. 1, no. 4, Apr. 1951, Praha)

SO: Monthly List of Russian Accessions, Library of Congress, \_\_\_\_\_ 1953, Uncl.

KARASEK, R.; KUBAT, M.

Contribution to the problem of bacterial contamination of water used  
in boring in uranium mines. Cesk. hyg. 7 no.9:536-542 0 '62.

1. Ustav pro hygienu prace a prevenci chorob z povolani, Jachymov.  
(WATER MICROBIOLOGY) (MINING) (URANIUM)

MARSALEK, J.; HULLER, C.; KUBAT, M.

Studies on the health status of the population of a small agricultural colony in a region with increased radioactivity. Neoplasma 9 no.6: 593-596 '62.

1. Factory Institute of National Health and Institute of Work Hygiene and Occupational Disease Prevention, Vejprty, CSSR.  
(AIR POLLUTION RADIOACTIVE) (VITAL STATISTICS)

CZECHOSLOVAKIA

Polak, H., MD; NERICHMA, V; KUBAT, M; KLIKA, J; KLESTEL, F;  
BARTEJS, J; KALALOVA, D.

Institute of Public Health (Ustav narodniho zdravi),  
Jachymovske doly (for all)

Prague, Prakticky lekar, No 16, 1963, p 628

"The Study of Morphological and Functional Condition of  
Blood and Marrow Elements of the Workers in the  
Jachymov Mines."

(7)

*Kubát, M.*

621.314.65 : 621.317.32

5053. Determination of the reverse current of a mercury rectifier by measurement and calculation.

M. Kubát, *Elektrotech. Ohsar.* 44, No. 7, 335-33 (1955) in Czech

The introduction surveys critically existing methods of measuring the reverse current. The author chooses the method suggested by Gratsovskii and Merkurshova for thyristors for his own measurements, suitably modified after a preliminary test. A non-inductive reverseance was designed in order to avoid the distortion of the initial section of the curve of the reverse current on the oscillogram by the considerable time gradient of the current. A theoretical derivation of the value of this time gradient at the end of the commutation period is given, as well as the theory of the static and dynamic components of the reverse current. This is based on the present state of the theory of the low-pressure discharge. Relations are derived for the initial value of the residual ionization density and from these the final expression for the initial value of the reverse current is obtained. The experimental results are then compared with those of the theory and suggestions made for improvements in rectifier design.

D. E. KRUIS

*Handwritten initials/signature*

KUPAT, M. ; KLOSS, A.

Sealed mercury-arc rectifiers in the Soviet Union.

P. 586. (ELEKTROTECHNICKY OBZOR) (Praha, Czechoslovakia) Vol. 46, no. 11, Nov. 1957

SO: Monthly Index of East European Accession (EEAI) LC Vol. 7, No. 5, May 1958

KUBAT, M.

Czechoslovak semiconductor power rectifiers. p. 17.

CHECHOSLOVAK HEAVY INDUSTRY. (Českodolvenská obchodní komora) Praha,  
Czechoslovakia. No. 10, 1959.

Monthly List of East European Accessions (SEAL) 10, Vol. 9, no. 1, Jan 1960

Incl.

S/194/61/000/009/041/053  
D255/D302

AUTHOR: Kubat, Milan

TITLE: Latest developments in the field of high-power semiconductor rectifiers in Czechoslovakia

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 9, 1961, 21, abstract 9 E144 (Chekosl. tyazhel'aya prom-st', 1960, no. 12, 2-9)

TEXT: Based upon the germanium and silicone rectifier developments in Czechoslovakia industrial production was undertaken by "CKD-Praga" of series 25 kW and 300 kW germanium as well as of some types of germanium rectifiers. The germanium rectifiers of the 25 kW series are issued in 5 types: 110 V, 170 A and 110 V, 400 A general purpose rectifiers; 150 V, 100 A and 150 V, 200 A transformer-less rectifiers with saturation chokes for battery charging; 50 V, 700 A transformer rectifiers with automatic adjustment for galv. purposes. The germanium rectifiers of the 300 kW series are

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S/194/61/000/009/041/053  
D256/D302

Latest developments...

issued in 4 types: 1) From 50 V, 5400 A to 350 V, 700 A; 2) from 50 V, 8000 A to 520 V, 700 A; 3) from 50 V, 2700 A to 350 V, 400 A; 4) from 50 V, 4000 A to 520 V, 400 A. Based upon the produced silicone rectifiers "VKA-15"-type rated 150 A, 300-400 V the "CKD-Praga" introduced production of standard rectifier panels for electrolysis rated 300 V, 6000 A or 500 V, 3000 A; and also 275 V, 500-1000 A for the electrified railways of the mining industry. In addition a silicone rectifier of 3000 kW peak rating was developed for the conventional railway system. Since 1960 the operation of test examples of various rectifiers is under the control of national enterprise "CKD-Praga". [Abstracter's note: Complete translation]

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9.2540 (1020, 1138, 1159)

Z/017/60/049/002/001/001  
E073/E535

AUTHORS: Nejedlý, Miloš. Engineer and Kubát, Milan. Engineer,  
Candidate of Technical Sciences

TITLE: Large Power Rectifiers Manufactured by ČKD, Prague

PERIODICAL: Elektrotechnický obzor, 1960, Vol.49, No.2, pp.74-82

TEXT: The article is intended as an overall report of the present state of development in the fields of mercury arc rectifiers and semiconductor rectifiers. In 1959 ČKD began the manufacture of a new type of single anode, air cooled, mercury arc rectifier with continuous evacuation. The rectifier is of the excitron type, UI-303. Its design was governed by the following considerations: a) the rectifiers should have such parameters that it should be possible to utilise them universally and economically within wide ranges of power and voltages between 660 and 3300 V; b) it should be easy to disassemble the tank and to repair the rectifier on the spot; c) it should have a small floor space, simple auxiliary circuits and it should be possible to operate it automatically or by remote control; d) high reliability and efficiency. The rectifier consists of six single anode tanks, arranged in a circle on a stand with a central axial fan and a simple circuit for distribution of the cooling air. The rectifier is fitted with Card 1/8

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Z/017/60/049/002/001/001  
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a continuously operating air cooled mercury vacuum pump, an automatic mercury seal in the high vacuum suction piping and a large pre-vacuum vessel. This vessel is evacuated by means of a rotary oil pump at intervals of several weeks, thus simplifying maintenance considerably. This rectifier corresponds to the following ratings according to ČSN 351510:

660 V	2000 A	1320 kW	over-load capacity	"A"
825 V	2000 A	1650 kW	"	"A"
1650 V	1250 A	2060 kW	"	"B"
3300 V	1000 A	3300 kW	"	"B"

The design of the vessel has several new features, a cross-sectional sketch is reproduced in Fig.3. The main anode is not placed in the tank but in a separate anode vessel. As a result of this, the considerable thermal losses of the anode do not heat the condensation surfaces, which control the pressure of the mercury vapours in the vessel and thus influence the operation of the rectifier. Consequently, the anode vessel can reach temperatures up to 200°C and, as a result of the high thermal gradient, the cooling intensity will be increased and, therefore, the dimensions of the rectifier

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Large Power Rectifiers .....

can be reduced. This new anode design has simplified also the manufacture and assembly of the control and deionization grids as well as of the screens. All these are mounted as a single assembly in the only part of the cathode which can be taken apart. The mercury of the cathode is very efficiently cooled since flat steel cathodes are used which are fitted with large cooling ribs. The cathode insulation is an enamel layer covering the cathode ring which is welded onto the bottom of the vessel. For intensive cooling of the vessel itself, tubes are used which pass through the vacuum space of the tank; this enables reducing considerably the tank dimensions. Prototypes of this rectifier have proved satisfactory in operation over several years. The development of sealed mercury arc rectifiers is proceeding in close cooperation with the All Union Electrotechnical Institute imeni V. I. Lenin in Moscow. Two types have been developed: 1) an aircooled single anode type, designed primarily for stationary and mobile traction rectifier stations with ratings of up to 4000 kW at 3.3 kV operating with six anodes; 2) single anode water cooled type, designed primarily for operation on single-phase 50 cps locomotives and in heavy electrolytic plants. Both these rectifiers are of the Card 3/8

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E073/E535

Large Power Rectifiers .....

ignitron type. The tank can be made without insulating the cathode which simplifies the design considerably, see sketch, Fig.4. ČKD, Prague is now faced with the task of completing the development and introduction of series manufacture of sealed ignitrons for the highest ratings. Basic work on the development of germanium and silicon rectifiers was begun at the Československá akademie věd, Ústav technické fyziky (ÚTF) (Czechoslovak Academy of Sciences, Institute of Technical Physics) in 1949. ČKD, Prague utilised these results and from 1958 onwards they started their own development of silicon rectifier cells and rectifiers. SVUSE, Běchovice participated in some of the tasks involved in developing semiconductor rectifiers. There are a number of Czech patents relating to germanium and silicon rectifiers and the standard achieved in Czechoslovakia compares favourably with that achieved in other major industrial countries. The inverse voltage of Czech produced large germanium cells reaches 300 to 400 V, which ensures a two to threefold voltage reserve in the case of operating voltages between 100 and 150 V per cell. Cells are being produced for ratings of 100 and 200 A; in the field of rectifiers, units

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are being built with ratings between 25 and 300 kW. Silicon cells are being produced on a pilot plant scale and inverse voltages of 1000 to 1600 V were achieved for currents of 105A/cell. In 1960 the first rectifier unit of 450 V d.c., 5000 A, was put into operation for the electrolysis of chlorine. This will be adopted as a typical unit for larger rectifying equipment, 25 kA, 325 to 650 V for electrolysis of chlorine or aluminium. Silicon rectifying units are being developed for ratings up to 3000 kW to be used in a.c. railway traction, a prototype of which is to be built in 1961 (ZVIL Locomotive). A particular feature is the technology of preparing the single crystals, which are manufactured by ČKD, Prague (25 to 30 mm dia. for germanium and 18 to 20 mm dia. for silicon). Due to the fact that Czechoslovakia does not have available the high purity silicon required for rectifiers, zonal suspension melting is applied, not only for purifying the material but also for growing the single crystal. For the time being preliminary chemical purification is entirely dispensed with. The repeated zonal refining has been automated. During this process boron is also removed (by zonal fusion in an  $H_2 + H_2O$  atmosphere). High frequency heating is applied. Repeated zonal refining (about Card 5/8

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30 times) produces the desired purity and, following that, zonal fusion apparatus is again used for drawing silicon crystals of 18 to 22 mm dia. During 1961 to 1965 ČKD, Prague is to increase its annual production of semiconductor cells from 14000 to 50000 approx., corresponding to an increase from a total capacity of 140 MW to about 500-700 MW rectified capacity in 1965. The cells will be used primarily in the chemical and metallurgical industries, mines, electric locomotives, tramways etc. There are 13 figures, 2 tables and 23 references: 13 Czech and 10 non-Czech.

ASSOCIATION: ČKD Praha, n.p. (ČKD, Prague)

SUBMITTED: November 14, 1959

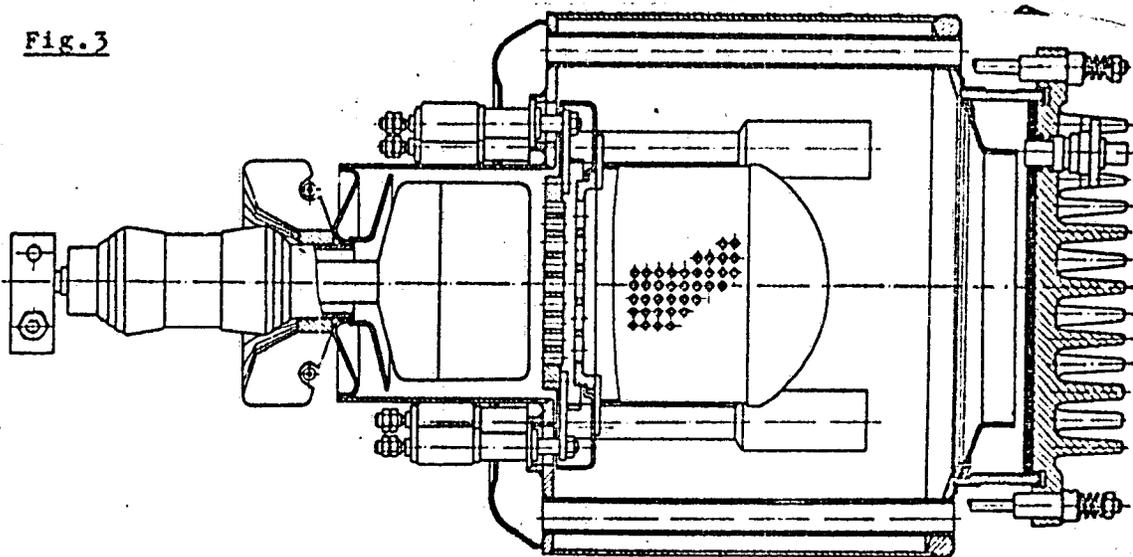
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Large Power Rectifiers .....

Fig. 3



Obr. 3. Rež usměrňovačem UI-303.

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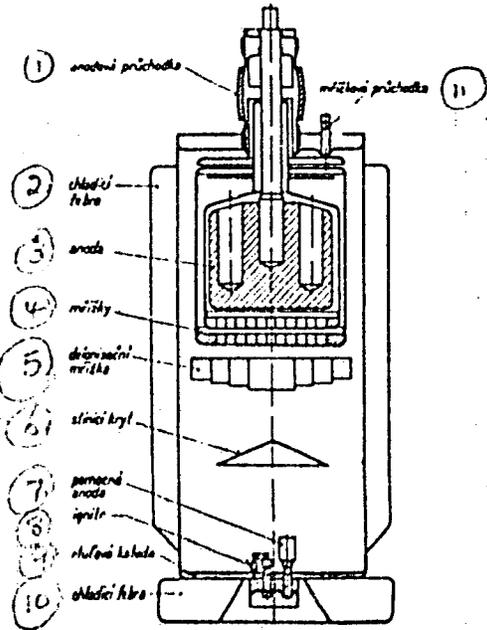
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Large Power Rectifiers .....

Fig. 4



- Legend**
1. Anode bushing.
  2. Cooling fins.
  3. Anode.
  4. Grids.
  5. Deionization grid.
  6. Screen.
  7. Auxiliary anode.
  8. Igniter.
  9. Mercury cathode.
  10. Cooling ribs.
  11. Grid bushing.

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Z/017/60/C49/011/003/013  
E073/E535

AUTHORS: Kloss, Albert and Kubát, Milan, Engineer, Candidate of Technical Sciences, winner of the Klement Gottwald Prize

TITLE: New Czechoslovak Results in the Field of Semiconductor Power Rectifiers<sup>25</sup>

PERIODICAL: Elektrotechnický obzor, 1960, Vol. 49, No. 11, pp. 554-557

TEXT: Several earlier articles (Refs.1-11) have been published on semiconductor rectifiers, with particular reference to rectifiers produced in Czechoslovakia. Germanium rectifiers with an average current intensity of 70 and 130 A have been developed and are being manufactured in Czechoslovakia, silicon rectifiers for an average current intensity of 150 A have been developed and are being introduced into production and germanium rectifier units for ratings of the order of 25 kW and 300 kW are being manufactured (Ref.7). In this paper the authors give brief information on the most recent Czech developments in the field of silicon rectifiers. The entire issue of this journal is devoted primarily to a number of separate problems relating to high power  
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Z/017/60/049/011/003/013  
E073/E535

**New Czechoslovak Results in the Field of Semiconductor Power Rectifiers**

semiconductor engineering, describing the solutions applied by Czech industry. The authors deal basically with equipment designed and manufactured by CKD, Prague. Detailed economic analyses have shown that greater savings are achieved by using silicon rectifiers in electrolysis, particularly for heavy industrial electrolysis as, for instance, for the production of chlorine, aluminium, copper etc. where d.c. voltages of 300 to 450 V are applied. Such applications have the great advantage that the power consumption has a high constancy without load peaks and without over-loading, so that it is possible to utilise the full load capacity without having excessive reserves. A further important field of application is in mine traction, since they enable building small low voltage (275 V) units which can be automated easily and distributed along the track, enabling considerable savings in capital investments. A further important field of application is 50 c.p.s. railroad traction; for this application the economic advantages are not great but the very

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E073/E535

**New Czechoslovak Results in the Field of Semiconductor Power Rectifiers**

large number of rectifiers which will be required in electrified railroads imposes the necessity of continuing work in this field. In Czechoslovakia development work on locomotive rectifiers is concentrated at ČKD, Prague. The silicon rectifier units for heavy electrolysis are built in Czechoslovakia for ratings of approximately 6000 A and 300 V or 3000 A and 500 V (all are d.c. values), whereby the parameters depend on the parallel and series connection of the rectifiers. One rectifier compartment, a dimensional sketch of which is shown in Fig.1, contains 96 to 120 UKA 15 silicon rectifiers with the appropriate protection and other auxiliary apparatus. The cooling is effected by two axial fans and the cooling system is so chosen that in the case of failure of one of the fans the rectifier unit can continue to operate with a reduced output. The problem of over-voltage protection has been dealt with in an earlier paper (Ref.11). The silicon rectifier units for mine installations are designed to

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E073/E535

New Czechoslovak Results in the Field of Semiconductor Power Rectifiers

operate in atmospheres with a zero degree of safety; they are built into a dust-tight steel compartments and cooling by means of circulating cold air or by using a water-air heat exchanger can be applied if desired. The output is 500 A, 275 V d.c. The rectifier unit can be overloaded almost continuously up to 1000 A. The rectifier unit consists of 12 to 18 UKA 15 rectifiers, which are connected into a three-phase bridge with parallel connection of the individual rectifiers. The protection is provided by specially designed high speed fuses and also deionizing protective devices. The cooling is effected by axial fans with interlocked signalling, so that the rectifier cannot be operated without cooling. The rectifier has been in experimental operation this year (1960). The silicon locomotive rectifier is designed for single-phase 25 kV 50 c.p.s. locomotives with four axles and an hourly rating of 3000 kW. The rectifier unit is built up of 120 UKA 15 silicon rectifiers arranged in a bridge circuit in each of which there are five rectifiers in series and six in parallel. The design is such as to satisfy the maximum

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New Czechoslovak Results in the Field of Semiconductor Power Rectifiers

current and voltage values which may arise in service. The continuous loading of the motor is 1025 A for a d.c. voltage of 750 V but at the limit of the locomotive adhesion the current consumption is 1600 A. Fig.3 shows a photograph of the rectifier unit (1600 A, 850 V d.c.). The applied rectifier unit weighs 350 kg. Protection against switching and external over-voltage is by an RC element fitted at the terminals of the rectifier. A prototype of the locomotive in which this equipment will be used will be manufactured in 1961. There are 3 figures and 12 references; all Czech.

ASSOCIATION: ČKD, Praha, n.p., závod Stalingrad  
(ČKD, Prague, Stalingrad Plant)

SUBMITTED: July 14, 1960

Card 5/5

KUBAT, Milan, inz., kandidat technických ved.

Functional tests of silicon rectifying valves. El tech  
obzor 51 no.8:418-419 Ag '62.

KUBAT, Miloslav, inz. (Praha)

Three-position regulator. Energetica Cz 13 no.8:446 Ag '63.

KUBAT, R.

Effect of cold and heat on healing of fractures. Acta. chir. orthop.  
traum. cech. 19 no.4-8:206-208 1952. (GLML 23:2)

1. Of the First Clinic of Orthopedics and Children's Surgery (Head--  
Prof. Z. Zahradnicek, M.D.) of Charles University, Prague.

4

KUBAT, R.

Rehabilitation following fractures of the femur. Acta chir. orthop.  
traum. cech. 20 no.7:140-142 1953. (CML 25:5)

1. Of the First Clinic of the Orthopedic Surgery, Prague.